$$G_0(D) = 1 + D^2 + D^3 + D^5 + D^6$$

$$G_1(D) = 1 + D + D^2 + D^3 + D^4 + D^6$$

$$G_2(D) = 1 + D + D^4 + D^6$$

This code is the best known code in its class. The free distance of the code is $d_{free}=15$. The code proposed in EDGE has a free distance of 14 (when puncturing is not applied).

The 78 Class II bits are passed to the output circuit 116 unencoded from line 108, and are designated by reference numeral 166 in Figure 8(b). It is standard in GSM for the Class II bits to be unencoded.

The 191 Class I bits of the second speech frame on line 125 are input to the convolutional encoder circuit 128. The 3,1,7 convolution code is again utilised in the convolution encoder circuit 126 to generate 573 bits on the output signal line 136, which are passed to the output circuit 116. These 573 bits are designated by reference numeral 168 in Figure 8(b).

The 78 Class II bits are passed to the output circuit 116 in unencoded form on line 110, and are designated by reference numeral 170 in Figure 8(b).

The output circuit 116 additionally receives 4 stealing bits SB on line 146. The four stealing bits are used to signal the type of the header (as in data transmission over EDGE). Each TDMA burst contains one stealing bit. Four stealing bits are therefore provided, as it is proposed herein that the RLC/MAC block is spread over four bursts as for data over EDGE. In addition to the 1377 bits generated and as shown in Figure 8(b), this leaves the total number of bits as 11 short of the number of bits available in an EDGE RLC/MAC block. Thus the output circuit 116 additionally receives 11 spare bits SPB on line 148. The output circuit then generates the completed EDGE RLC/MAC block on line 149, comprising 1392 bits, for transmission.

Referring to Figure 8(c), the completed RLC/MAC block for the down-link is illustrated, and corresponds to the format shown in Figure 8(b) with the